Lesson Preparation book Computer

1st.Prep – First Term 2023 - 2024

Teacher's Biography

Name: ....

School: ....

The educational administration: ....

Qualification: ....

Teaching Subject: ....

Comprehensive School: ....

The school to which he is delegated: ....

Date of appointment: ....

The job is on the staff: ....

Teacher Code: ....

Mobile Number: ....

Teacher	Supervisor	School Principal
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Daily class schedule

Session / Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eightieth	Ninth
Saturday									
Sunday									
Monday									
Tuesday									
Wednesday									
Thursday									

Session / Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eightieth	Ninth
Saturday									
Sunday									
Monday									
Tuesday									
Wednesday									
Thursday									

Teacher   **Supervisor**   **School Principal**

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The General Objectives of Computer

At the end of the second term the student will be able to :

❑ Know the concepts, processes and infrastructure of a computer system (software – hardware – network)

❑ Using technological production tools to support and develop his learning.

❑ Producing some applied projects (creative art painting) using technological processes, programs and tools.

❑ Employing technological communication tools in exchanging content and visions with others.

❑ The use of technological sources in dealing with electronic information.

❑ Using technological sources to process and evaluate data and prepare results reports

Teacher	Supervisor	School Principal
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The specified objectives of computer

At the end of the second term the student will be able to :

- ❑ Define the computer concept.
- ❑ Identify some modern computer types.
- ❑ Deduce the main components of the computer system.
- ❑ Differentiate between data and information.
- ❑ Differentiate between hardware and software.
- ❑ State the kinds of the main memory.
- ❑ Show the job of the central processing unit
- ❑ Distinguish the different kinds of software
- ❑ Identify capacity storage units
- ❑ Search for internet websites with his colleagues
- ❑ Give the meaning of operating system.
- ❑ Numerate the operating system jobs.
- ❑ Differentiate the different types of modern operating systems.
- ❑ Mention the similarities of Graphical user interface (GUI) elements of operating system.
- ❑ Identify the file and folder concept.
- ❑ Identify the most important kinds of files.
- ❑ Deal with the file, folder (create, save, copy and cut).
- ❑ Define the computer net concept.
- ❑ Mention the importance of computer nets and its usage
- ❑ Recognize program of creating and modifying images (Gimp)
- ❑ Use the Help menu to identify the contents of the creating and modifying images program interface.
- ❑ Use some of the selection tools efficiently
- ❑ Create a new image file.
- ❑ Design a simple drawing.
- ❑ Draw free shape.
- ❑ Export image file with an appropriate extension.

Teacher	Supervisor	School Principal
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Date				
Session				
Class				

Strategy	Dialogue and discussion – Brainstorming
Teaching aids	Electronic board – Data show – Flash cards

Unit One (Computer Basics and Operating system)
Lesson (1) Computer Basics

Lesson objectives: By the end of the lesson, the student should be able to:
- **Define** the computer concept.
- **Identify** some modern computer types.
- **Deduce** the main components of the computer system.

Warm up: **What** is a Computer System components?

Lesson Presentation

❑ **Computer:** – is an electronic set or device that process data and converting it into information.

❑ **Computer types:**

1– **Desktop**   **2–** **Laptop**   **3–** **Smart devices**

❑ **Computer system consists of:**
- Hardware. (Input units. output units. system unit. storage unit)
- Software. (programs)
- Humanware. (Human or person who use the computer)
- Data and Information

❑ **Data**
- Consists of individual facts or bits of information
- The computer stores data of all kinds (words, number, image, sound or videos).

❑ **Information**
- Information is the result of processing Data

Information ← Process ← Data

❑ **Hardware:** any part of computer you can <u>touch</u>
1) **Input unit:** entering data
2) **Output unit:** output information
3) **Storage unit:** saving data (Flash Memory / Hard Disk)
4) **System unit:** main part

📖 Touch screen is an **input** and **output** unit

Evaluation: **Complete:** .... is the result of processing Data.

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Strategy	Dialogue and discussion – Brainstorming – peer learning
Teaching aids	Electronic board – Data show – flash cards

Unit One (Computer Basics and Operating system)
Lesson (2) Following Computer Basics

Lesson objectives: By the end of the lesson, the student should be able to:
- **Differentiate** between hardware and software.
- **State** the kinds of the main memory.
- **Show** the job of the central processing unit

Warm up: **What** is a Computer System components?

Lesson Presentation

❑ **System Unit consist of:** –
1) **Main Memory:** (**RAM** / **ROM**)
A) RAM → Random Access Memory: Its contents can be changes.
B) ROM → Read Only Memory: It is called the permanent memory because its contents are never affected by turning the electricity off and it can save its content permanently.
2) **Central Processing Unit:** (**CPU**): – is responsible for doing any logical and mathematical processes which lead to data Processing according to the orders and instructions of the different programs.
- The processor consists of two main units: Arithmetic and logic unit (**ALU**) – Control unit (**CU**).
3) **Motherboard:** Processor, RAM الجذيرة | ROM can be constructed inside the computer case.
❑ **Storage capacity measurement units:** – It consists of 8 bits Storage unit can be measured by doubling Byte

.

Terabyte →1024→ Gigabyte →1024→ Megabyte →1024→ Kilobyte →1024→ Byte →8→ Bit

Bit / Byte / Kilobyte / Megabyte / Gigabyte / Terabyte

❑ **The unit of measuring the processor speed:** (**HZ**) and its doubling
❑ **Software:** – is a set of programs used to operate the computer and employ it to do different tasks.
❑ **Closed source program:** – A type of programs where you can't read its source code. It is only available for programmers or designers. **Ex:** Photoshop /Microsoft office/Adobe Reader /Windows
❑ **Open source program:** – They are the programs of source code available for use, editing, development and distribution. **Ex:** Open Shot/ Gimp / Libre Office

❑ **Software is based on the rights of ownership divided to three types:**
1) **Freeware:** allow the possibility to take full advantage of them without a fee
2) **Shareware:** trial program for limited time
3) **Software** is authorized for use only by buying the original copy

❑ **Humanware:**
1) Analyst   2) Designer   3) Programmer   4) User

Evaluation: **Complete:** – ……………… A type of programs where you can't read its source code.

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Date				
Session				
Class				

Strategy	Dialogue and discussion – Brainstorming – Question boards
Teaching aids	Electronic board – Data show

Unit One (Computer Basics and Operating system)
Lesson (3) Operating System

Lesson objectives: **By the end of the lesson, the student should be able to:**
- **Give** the meaning of operating system.
- **Numerate** the operating system jobs.
- **Differentiate** the different types of modern operating systems.

Warm up: **What** are the operating systems which can be used?

Lesson Presentation

Operating systems are the most important computer programs that enable users to run (Open) other programs and manage all parts of the computer such as input units and output units.

❑ **Definition of operating system: –**

A group of programs responsible for managing computer parts and Intermediary between the user and the programs on the one hand and between the hardware on the other hand

❑ **Operating system responsible for running**
- **Hardware**
- **Software**

User can deal with the operating systems by: – Command Prompt or Graphical user interface

❑ **Command prompt**
- Called Terminal in some operating system
- User direct the command to operating system written the keyboard

`[moe@localhost ~]$ clear_`

❑ **Operating system task**
1. Control all devices connected with the computer (printer, scanner …..)
2. Manage the dealing between software and memory.
3. Transferring data between different computer units and saved inside storage units
4. Security (password)
5. It provides an interface through which the user can deal with the device.

❑ **Types of Operating systems according to (closed / open source)**
- Closed source operating system: – **Mac** OS (Apple Macintosh devices only) – **Windows** (most famous operating system)
- Open source operating system: – **LINUX** OS and its Distributions – **Fedora** – **Ubuntu**
- Mobiles operating systems: –
- 1– Google **Android OS** → open source operating system
- 2– Apple **IOS** → closed source

Evaluation: **Complete:** – ....programs of source code ....diting, development and distribution.

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Date			
Session			
Class			

Strategy	Dialogue and discussion – Brainstorming – peer learning
Teaching aids	Electronic board – Data show

Unit One (Computer Basics and Operating system)
Lesson (4) Graphical Operating Systems Interface

Lesson objectives: By the end of the lesson, the student should be able to:
- **Mention** the similarities of Graphical user interface (GUI) elements of operating system.
- **Shares** searches with colleagues on government websites
- **Understand** the importance of operating systems for computers and smartphones

Warm up: **Define** graphical interface? And **what** are its advantages?

> Lesson Presentation

❑ **Graphical user interface**

Any operating system has graphical user interface which includes Commands and it display in a form of Menus, picture and toolbars, **Mouse** is a main input unit in dealing with menus

❑ **Advantages of Graphical User Interface for operating systems**

1. Graphical interface displays programs in the form of regular windows
2. Users can use dropdown menus and toolbars to do his tasks
3. Users can run more than one programs at the same time
4. Arabic language can be used as an interface language for the programs
5. Providing browser to open website.

On starting the computer, operating system makes sure of the safety of main units such as temporary memory (**RAM**), Keyboard, screen and disc drivers. The self–test program which found in ROM can do that; In case of having no problems, operating system starts then, the opening screen appears for user to start achieving his work.

❑ **The similarities between operating systems**

The interfaces of the operating systems can be similar in the following:–
1– **Background** :– may be colors , pictures that can be changed by the user
2– **Icons** :– small symbols that can be used to run programs
3– **Bars:–** used to contain icons such as date and time icons

❑ **Note:** Computer can contain more the operating system and when we open our computer we have to choose one of them.

Evaluation: **Complete:–** One of Graphical User Interface 's Advantages.....................

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Date			
Session			
Class			

Strategy	Dialogue and discussion – Brainstorming – Question boards
Teaching aids	Electronic board – Data show

Unit One (**Computer Basics and Operating system**)
Lesson (5) Dealing with files and folders

Lesson objectives: **By the end of the lesson, the student should be able to:**
- **Identify** the file and folder concept.
- **Identify** the most important kinds of files.
- **Deal** with the file (create, save, copy and cut)

Warm up: **How** do we manage files and folders (Create, save...)?

Lesson Presentation

One of the most advantages of operating system is to control files management and organize them in folders and indexes, Each operating system depends on **file system** which is used for how to store, restore, organize and manage files.

⚙ **File: –** is considered one of the most thing that used in storing data.
When we deal with operating system each of text, picture , sound considered a **File**

⚙ **File: –** it is a collection of data that can be stored within storage devices with different extension, File name consist of two parts and between them Dot (.)
First part : file name   Second part: extension Example: – Hello . doc

❑ **Types of common files:–**
1. **Video files:** This file contains sound and images .
2. **Image files:** They are created by graphic programs including graphic data .
3. **Text files:** There are several office programs such as MS office, libre office .
4. **System files:** These files mustn't be played with or deleted so as not to affect operating system work badly.

❑ **Creating text files:–** Run any text editor program (word), Type the text you want to write
❑ **Saving text files**
   1. Open **file** menu, Select **save as**
   2. Save as dialogue box appears, Type the name of the file you want to save
   3. Select the location where you want to save the file, Select **Save**

▪ There is no difference between Save or Save As for the first time
▪ Save as used to save copy of the file with a new name in the same or another place
▪ We can save file by clicking on (Ctrl + S) from the keyboard.

❑ **Search by using the name of file or folder :–**
   1. Type the full name or part of the name in search box
   2. Folders that contain the name appear; look figure down.

❑ **Search by using the file extension:–** This can be done using the symbol (*) instead of the file origin name and write the file extension

Evaluation: **Complete:–** We can save file by clicking on.....................

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Date				
Session				
Class				

Strategy	Dialogue and discussion – Brainstorming – practical training
Teaching aids	Electronic board – Data show

Unit One (**Computer Basics and Operating system**)
Lesson (6) Following Dealing with files and folders

Lesson objectives: By the end of the lesson, the student should be able to:
● **Identify** the file and folder concept.
● **Understand** the importance of files and folders to any operating system.
● **Deal** with the folder (create, save, copy and cut)

Warm up: **How** do we manage files and folders (Create, save…)?

> **Lesson Presentation**

✵ **Folder definition: –**
▪ A place inside the storage place contains a file or group of files, and sometimes contains a folder or other folders which is called sub – folders.
✵ **Creating folder**
1. Right click on the area where you want to create new folder
2. Shortcut menu appears, Select new folder.
3. Type the new folder name, Click Create.
✵ **Note:**
▪ We can create new folder by clicking on **Ctrl + Shift + N from** the keyboard
▪ Folder can contain file or other sub folder, we can be identifying its size and the number of elements (the contents of the files and folders).

✵ **To Cut a folder →** **The folder moves from its current location and moves to a new one.**
  A. Right click on the folder you want to cut, from shortcut menu select cut.
  B. Go to the new location.
  C. Right click, from shortcut menu select paste.
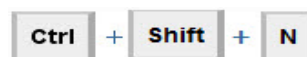
✵ **To Cut a folder →** **Make a backup from a folder in the same storage place or in another place.**
  A. Right click on the folder you want to copy, from shortcut menu select copy
  B. Go to the new location
  C. Right Click, from shortcut menu select paste.

✵ **To Rename a Folder**
  A. Right click on the folder you want to rename, From shortcut menu select rename.
  B. Write the new name then click Rename.

✵ **To Delete a Folder**
  Right click on the folder you want to delete, from shortcut menu select move to trash

✵ **Restoring deleted folders from recycle bin**
  A. Double click on the recycle bin folder (trash folder).
  B. Right click on the folder you want to restore.
  C. From shortcut menu select Restore from Trash.
  Note: When we want to delete file or folder from Trash we select Delete from Trash

Evaluation: **Put (√) or (x):-**
  The type of the file can be identified through its extension only. (   )

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Strategy	Dialogue and discussion – peer learning
Teaching aids	Electronic board – Data show

Unit One (Computer Basics and Operating system)
Lesson (7) Computer Networks

Lesson objectives: By the end of the lesson, the student should be able to:
- **Define** the computer net concept.
- **Identify** types of computer nets.
- **Mention** the importance of computer nets and its usage

Warm up: **What** are the computer nets? **How** can you share your files with your mates?

Lesson Presentation

- **Computer Network : –** It is a connection of two or more computers through a communication intermediary wired or wireless connection in order to share resources.

- **The importance of computer networking**
1. Sharing resources (such as printer – scanner – storage devices)
2. Sharing data and programs between computers network.
3. A centralized database

- **Types of networking : –**
1. **Local Area Network (LAN): –** Computer network covering a limited area .
2. **Wide Area Network (WAN): –** Computer network covering a large geographical distance **The internet is a type of WAN**

- **Files sharing : –** Means to publish digitally stored information.

- **Steps of sharing folders in windows operating systems**
  1– Put the files inside a folder.
  2– Right click on the folder (Books) which contains the files you want to share
  3– From shortcut menu select Share with, Select specific people from sub menu
  4– File sharing dialogue box appears, Choose the user you want to share with.
  5– Click " **Add** " to be from the allowed users.
  6– Determine Permission Level (Read or Read / Write), Click Share button.

- **What's your computer name?**
  1. Right click on My Computer icon, Select Properties from the shortcut menu
  2. Computer name appears in the box computer name

- **Access to a folder on the network**
  1. Click on " **Network** " on the desktop, Double click on the desired device to access it
  2. The window of the al folders that are shared appears.

- **Sharing Files in Fedora operating system**
  1. Click on Activities which located in the top bar of the opening screen.
  2. Type " **Sharing** " in the search bar, click on sharing icon
  3. Turn the sharing button from **OFF** to **ON** , Turn Personal File Sharing into **ON**

Evaluation: **Complete: –** One of The importance of computer networking is………..

Strategy	Dialogue and discussion – practical training
Teaching aids	Electronic board – Data show – Gimp

Unit Two (Creating and Modifying Image)
Lesson (1) Image processing software

Lesson objectives: By the end of the lesson, the student should be able to:
- **Recognize** program of creating and modifying images (**Gimp**)
- **Use** the Help menu to identify the contents of the creating and modifying images program interface.
- **Use** some of the selection tools efficiently

Warm up: **How** can image processing programs be used?

Lesson Presentation

❑ The programs of creating and modifying images used to assist in designing, creating and modifying different images.

❑ The **GIMP** program is an open and free source program that allows the creation and processing of images.

❑ When opening the **GIMP** program for the first time it is usually on (**multi–window mode**). To facilitate using the program, It could be in the (**Single window mode**) from the "**Windows menu**" → Single–**Window Mode**

❑ The **GIMP program default Interface consists of :**
1. The Main Toolbox .
2. The Tool options Dock.
3. Image windows.
4. (The Layers/Channels/paths/Undo) Dock.
5. (Brushes/Patterns/Gradients) Dock.

→ To know more about **Gimp**, click **F1** from the keyboard to open the **Help** of this program

❑ **To restore any closed tabs:** Windows menu → Recently Closed Docks

❑ **selection tools:–** to select a part or more of the image to deal with, like delete, cut, copy , paste, change the color of the selected part in order not to change the whole image.

❑ **The selection tools:**

Rectangle tool: Used to draw a rectangular shape

Ellipse tool: Used to select the oval shape of the image.

Free Selection (Lasso): Used to select an irregular part of the image in a freeway.

Magic Wand tool or Fuzzy Selection: Used to specify similar color schemes and areas of the image.

Smart Scissors: useful tool when trying to specify an area specified or distinguished with a clear and strong color where the colors of the borders are changed in a clear manner.

Evaluation: **Complete:–** Smart Scissors Used to..................
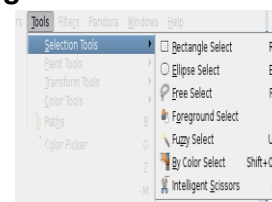
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Strategy	Dialogue and discussion – Brainstorming – practical training
Teaching aids	Electronic board – Data show – Gimp

Unit Two (Creating and Modifying Image)
**Lesson (2) Following Image processing software**

Lesson objectives: By the end of the lesson, the student should be able to:
- **Create** a new image file.
- **Design** simple drawings.
- **Save** the image file and all its data using the option Save.

Warm up: How can you use the selection tools to create a new image?

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Lesson Presentation
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- Create a new image file through: **File** menu → **New**.
  In the dialogue box to create a new image:
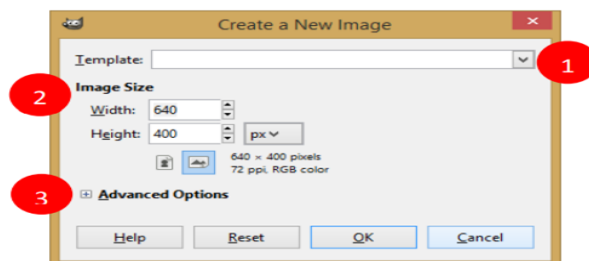
1– **Templates:** are previously ready–made designs prepared of the dimensions and the resolution of the image.
2– **Image Size:** to identify the dimensions of the new image (length and width) by clicking on the arrows.
3– **Advanced Options:** by clicking on + sign the rest of the dialogue box appears as follows:
4– **Resolution:** used to determine the image accuracy when printing
5– **Color Space:** This is used to determine the Image color scheme **RGB** or Gray scale
6– **Fill with:** It is used to specify the new image filling color which can be:
  – Background Color
  – Foreground Color
  – White filling the image in white color.
  – Transparency to make the image background transparent.
- When save the image by the command Save from the **File** menu:
→ The GIMP program offers the extension XCF to the image file, to save all the information about the image (Layers – Transparency).

Evaluation: **Complete:** – The GIMP program offers the extension ....

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Strategy	Dialogue and discussion – critical thinking
Teaching aids	Electronic board – Data show –– Gimp

Unit Two (Creating and Modifying Image)

Lesson (3) Following Image processing software

Lesson objectives: By the end of the lesson, the student should be able to:

- **Draw** a free shape.
- **Design** gradient color scheme.
- **Copy** part of the picture in the same layer.

Warm up: **What** are the drawing tools? **How** could they be used?

Lesson Presentation

Paint tools are used for different drawing purposes such as free hand drawing, create gradient color scheme, merge the current color with the surrounding colors, copy part of the picture in another place in the same image…

- **Pencil Tool :** The pen in the Pencil tool used for free hand drawing.

- **Blend Tool:** The Gradient color scheme Blend tool used to make color gradation using the front or back color.

- **The Smudge tool** used to mix the current color with the surrounding colors.

- **Use the Ink** tool like a fountain pen to control drawing distinguished borders and edges with the brsh

- **Use the Eraser** tool to remove a coloring Space of a picture or a drawing.

- **Use the Paintbrush** tool to draw clearly.

Evaluation: **Put (√) or (x):–**

Paintbrush tool Like a fountain pen to control drawing distinguished borders and edges with the brush (

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Date				
Session				
Class				

Strategy	Dialogue and discussion – critical thinking
Teaching aids	Electronic board – Data show – Gimp

Unit Two (Creating and Modifying Image)
Lesson (4) Following Image processing software

Lesson objectives: By the end of the lesson, the student should be able to:
- **Move** the image.
- **Cut** the image.
- **Rotate** image.

Warm up: **What** are the transforming tools? **How** could they be used?

Lesson Presentation

- **Transform tools** are used to change the shape of an image by moving or resizing.

- The **Transform tools** can be used from the Tools menu, or from the dialogue box. There are different tools, each of which has a function and usage.

❑ **Transform tools:**

– **Move tool** which is used to move an image or image layers or selection or text.

– **Open an image** file from the Image folder, Use a selection tool to select a part of the image.

– **To move a selection**, press **ALT + CTRL**, continue pressing using the Move tool to move the selection.

– **Crop tool** is used to cut part of an image.

– **Rotate tool** is used to rotate an image

– **Flip Tool** is used to horizontally or vertically flip an image

– **Scale tool** is used to change the dimensions of an image

Evaluation: **Put (√) or (x):–**
Scale tool is used to change the dimensions of an image.   (   )

Strategy	Dialogue and discussion – practical learning– cooperative learning
Teaching aids	Electronic board – Data show – Gimp

Unit Two (Creating and Modifying Image)

Lesson (5) Following Image processing software

Lesson objectives: By the end of the lesson, the student should be able to:

- **Recognize** the concept of image layers.
- **Be proficient** in the use of the image layers to create an image.
- **Modify** an image using image layers.

Warm up: What are the image's layer? How could they be used?
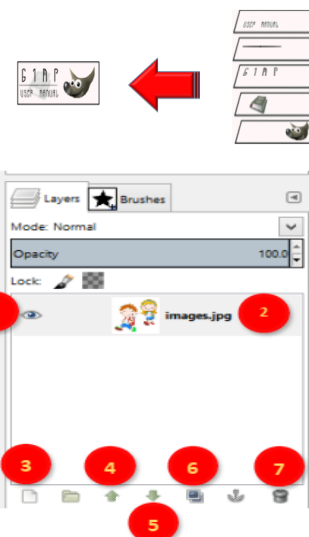

Lesson Presentation

❑ **The "Layers" tab uses to edit, add and control different picture layers.**

- ▪ To make the layer invisible, press on the icon.
- ▪ To add a new layer, press on the icon.
- ▪ To move the level of layer to the top, press on the icon.
- ▪ To move the layer to a lower level, press the icon
- ▪ To copy the current layer, press on the icon.
- ▪ To delete the current layer, press on the icon.

- ▪ To deal with the layer, press on it so that the current layer becomes "Active Layer."
- ▪ To rename a layer, Double Click on the layer and type its name.
- ▪ Text Tool: – Your text is inserted through the Text tool, and it should be noted that when using the text tool is automatically inserted a new layer for the text, and the text box be shown in which text will be written, new layer name will be words from the beginning of the written text.

❑ **To export the image as a file with the appropriate extension:**

- ▪ Ensure that all layers are Visible.
- ▪ Merging all layers, to become one layer, chooses Flatten Image from the Image menu
- ▪ From the File menu, choose Export, select the appropriate extension of the file and type the file name.

Evaluation: Complete: – The "....................................." tab uses to edit, add and control different picture layers

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Strategy	Dialogue and discussion – Brainstorming – practical learning
Teaching aids	Electronic board – Data show – Gimp

Unit Two (Creating and Modifying Image)
Lesson (6) Following Image processing software

Lesson objectives: **By the end of the lesson, the student should be able to:**
- **Identify** the concept of Filters.
- **Identify** how to use Filters.
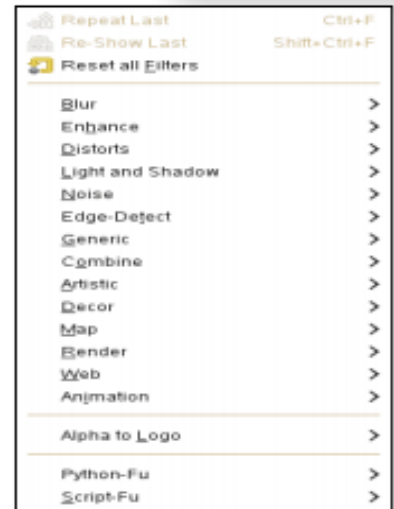- **Change** the appearance of an image using Filters.

Warm up: **What** is the Filters? And **how** it can be used?

Lesson Presentation

❑ The **filter** is used to help change the appearance of the image.

❑ When applying the **filter**, a **new layer** is added to the image or a new file is created.

❑ To use a filter, open the **Filters menu** and select the **appropriate filter**.

1. **Blur filter:** used to blur and darken the image.

2. **Emboss filter:** It is used to create an outstanding gray effect on the image.

3. **Page curle filter:** It is used to create a curl effect on the edge of the image.

4. **Supernova filter:** used to make a star flash in the image.

5. **Film filter:** It is used to create a film strip effect on the edges of the image.

6. **Weave filter:** It is used to create a texture effect on the image.

7. **Old photo filter:** used to create an effect that the photo is old.

8. **Map Object Filter:** It is used to make the image in the form of a cube or cylindrical.

Repeat Last	Ctrl+F
Re-Show Last	Shift+Ctrl+F
Reset all Filters	
Blur	>
Enhance	>
Distorts	>
Light and Shadow	>
Noise	>
Edge-Detect	>
Generic	>
Combine	>
Artistic	>
Decor	>
Map	>
Render	>
Web	>
Animation	>
Alpha to Logo	>
Python-Fu	>
Script-Fu	>

Evaluation: **Put (√) or (x):-**

When applying the filter, a new layer is added.

(   ) to the image or a new file is created.   (   )

Strategy	Dialogue and discussion – Brainstorming – cooperative learning
Teaching aids	Electronic board – Data show – Gimp

Unit Two (Creating and Modifying Image)
Lesson (7) Following Image processing

Lesson objectives: **By the end of the lesson, the student should be able to:**

- **Differentiate** between bitmap Images Raster and Vector Images
- **Recognize** the color mode of the image (Image Mode).
- **Modify** one of the images Image Mode.

Warm up: **How** can you design and create a Painting?

┌─────────────────────────┐
│ **Lesson Presentation** │
└─────────────────────────┘

❏ **Image types:**

–**Raster Images:** – It consists of contiguous points (**Pixels**), and each image contains rows and columns of the Pixels and the higher the number of the Pixels, the greater image clarity is, It has a large storage area for the image, and the quality and clarity of the picture change when zooming in or out.

–**Vector Images:**– It is characterized by no change in image quality and clarity when enlarged

or minimized, and it has a small storage area.

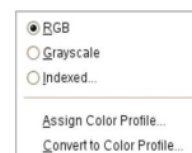❏ **There are three modes of color of the image; namely:**
   1. RGB mode.
   2. Grayscale mode.
   3. Indexed mode.

❏ **RGB mode:** – consists of the primary colors (red, green and Blue), and these three colors are mixed and united with different degrees of mitigation, lighting and intensity to give each primary color of these colors 256 color degree.

❏ **Grayscale mode:** – The image can be converted to the color Grayscale by using the command

Grayscale from Image menu, where Grayscale mode reaches up to 256 degrees of gray ranging from black to white.

- The image can be converted from **RGB** mode to **Grayscale** by selecting the Grayscale command from Image menu, But it should be noted that the image will lose its Colorimetric data of the RGB mode so that the RGB mode for the image cannot be restored again.

- In order for other programs to be able to read the image file, the image must be exported through the command **Export** from the **File** menu where the appropriate image file extension such as (**JPEG – GIF – PNG** .) is selected.

Evaluation: **Put (√) or (x):–**
There are three modes of color of the image ( )

Date				
Session				
Class				

Strategy	Dialogue and discussion – Brainstorming – cooperative learning
Teaching aids	Electronic board – Data show – Gimp

Unit Two (**Creating and Modifying Image**)
Lesson (8) Following Image processing software

Lesson objectives: **By the end of the lesson, the student should be able to:**
- **Design** one of the painting.
- **Use some** tools in the program.
- **Create** painting through layers.

Warm up: **How** can you design and create a Painting?

Lesson Presentation

To draw the desired painting, each part of the painting will be drawn in a special layer as follows:–

All steps are in the student's book

Evaluation: **Complete:** – Digital images are divided into Raster images and ....

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